APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,999	09/30/2003	Kurt A. Dobbins	026215-00006	2807

4372 7590 11/02/2007		EXAMINER
ARENT FOX LLP		BURGESS, BARBARA N
1050 CONNECTICUT AVENUE, N.W.		

ART UNIT	PAPER NUMBER
2157	

SUITE 400
WASHINGTON, DC 20036

NOTIFICATION DATE	DELIVERY MODE
11/02/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

	Office Action Summary	Application No.	Applicant(s)
:		10/673,999	DOBBINS ET AL.
		Examiner	Art Unit	
		Barbara N. Burgess	2157	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 07 August 2007.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-20 is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-20 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. 10-27-07.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Amendment filed August 7, 2007. Claim 1 is

presented for further examination. Claims 2-20 are presented for initial examination.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-20 is rejected under 35 U.S.C. 102(e) as being anticipated by Ikeda et

al. (hereinafter "Ikeda", US Patent 6,788,683 B1).

As per claim 1, Ikeda discloses a method for transmitting data according to a flow table,

a flow key, and one or more variables comprising:

Receiving a data transmission (column 3, lines 4-8, column 4, lines 30-32, column 7,

lines 38-40);

Extracting at least one field from a header of the data transmission (column 5, lines 52-

54, column 7, lines 37-39);

Determining a most granular bit-value mask corresponding to the at least one field from

a mask table having a plurality of bit-value masks (column 7, lines 65-67, column 8,

lines 3-10, 16-25);

Applying the determined bit-value mask to the at least one field (column 7, lines 48-59,

column 8, lines 35-40, column 9, lines 1-5);

Forming the flow key based on the application of the determined bit-value mask to the

at least one field (Ikeda teaches an extracted packet header from an IP packet is

masked with the retrieval flag to create a post-mask retrieval key and used for flow

identification) (column 3, lines 11-15, 25-30, 64-66, column 8, lines 13-15, column 9,

lines 44-47, 60-63);

Indexing the flow table with reference to the masked flow key (Ikeda teaches several

tables used for obtaining flow information according to the masked key. A content-

addressable memory (CAM) is used for flow identification as a flow retrieval table. A

retrieval flag table stores numeric values and flow identification results corresponding to

a post-mark retrieval key. A flow action table storing flow information according to the

combination of a Flow Index and Forwarding Index used as the retrieval key) (column 3,

lines 26-30, 54-56, column 4, lines 52-55, column 8, lines 56-60, 66-67, column 10,

lines 32-39);

Looking up a flow entry in the indexed flow table (Ikeda teaches retrieving a flow

retrieval corresponding to a post-mask retrieval key output from the retrieval flag table

from a flow retrieval table) (column 5, lines 60-67);

transmitting data according to the flow entry (Ikeda teaches retrieving flow action

information from a flow action table wherein the information including setting quality of

service (QoS), processing the IP packet based on the flow action information from the

flow action table to create a transmission IP packet and transmitting the IP packet to its

destination) (column 6, lines 10-19).

As per claim 2, Ikeda discloses the method according to claim 1, further comprising:

extracting a plurality of fields from a header of the data transmission (column 5, lines

52-54, column 7, lines 37-39);

determining a most granular bit-value mask corresponding to each of the plurality

of fields from a plurality of mask tables, wherein each of the plurality of mask tables

includes a plurality of bit-value masks (column 7, lines 65-67, column 8, lines 3-10, 16-

25);

applying the determined bit-value mask to each of the plurality of fields (column 7, lines

48-59, column 8, lines 35-40, column 9, lines 1-5);

forming the flow key based on the application of the determined bit-value masks

to the plurality of field (column 3, lines 11-15, 25-30, 64-66, column 8, lines 13-15,

column 9, lines 44-47, 60-63).

As per claim 3, Ikeda discloses the method according to claim 1, further comprising:

if no bit-value mask in a mask table corresponds to the at least one extracted

field, no mask is applied to the at least one field (column 10, lines 7-14).

As per claim 4, Ikeda discloses the method according to claim 3, further comprising:

if no flow entry corresponds to the formed flow key, a default value is used for the

flow entry (column 8, lines 45-49).

As per claim 5, Ikeda discloses the method according to claim 1, wherein determining a

most granular bit-value mask includes performing a longest prefix match for the at least

one field (column 9, lines 49-56).

As per claim 6, Ikeda discloses the method according to claim 1, wherein the at least

one field includes at least one selected from a group consisting of a source port, a

destination port, a source IP address, and a destination IP address (column 7, lines 31-

47).

As per claim 7, Ikeda discloses the method according to claim 1, wherein the mask

table includes at least one selected from a group consisting of an address mask table

and a port mask table (column 8, lines 28-31).

As per claim 8, Ikeda discloses the method according to claim 1, further comprising:

entering a bit-value mask in the mask table by a service provider (column 7, lines 6-14).

As per claim 9, Ikeda discloses the method according to claim 1, wherein the bit-value

mask corresponds to a range of a plurality of subscribers to a service (column 4, lines

17-20, 52-55).

As per claim 10, Ikeda discloses the method according to claim 9, wherein the plurality

of subscribers includes at least one selected from a group consisting of network hosts

and a subnetwork (column 3, lines 30-35).

As per claim 11, Ikeda discloses the method according to claim 1, wherein the bit-value

mask corresponds to at least one network application (column 3, lines 49-53).

As per claim 12, Ikeda discloses the method according to claim 1, wherein the flow

entry includes transmission information (column 12, lines 59-65).

As per claim 13, Ikdeda discloses the method according to claim 12, wherein the

transmission information includes at least one selected from a group consisting of

application specific qualities an service specific qualities (column 3, lines 33-36, 50-53).

As per claim 14, Ikeda discloses the method according to claim 13, wherein the

transmission information includes at least one selected from a group consisting of

policy, quality of service, and latency (column 4, lines 17-20, 52-55).

As per claim 15, Ikeda discloses a system for transmitting data according to a flow

table, a flow key, and one or more variables, the system comprising:

a receiving unit configured to receive a data transmission (column 3, lines 4-8, column

4, lines 30-32, column 7, lines 38-40);

an extraction unit configured to extract at least one field from a header of the

data transmission (column 5, lines 52-54, column 7, lines 37-39);

a mask table including a plurality of bit-value masks (column 3, lines 26-30, 54-56,

column 4, lines 52-55, column 8, lines 56-60, 66-67, column 10, lines 32-39);

a masking unit configured to determine a most granular bit-value mask corresponding to

the at least one field from the mask table, apply the determined bit-value mask to the at

least one field, and output a masked flow key (column 7, lines 65-67, column 8, lines 3-

10, 16-25);

a flow table indexed with reference to the masked flow key (column 5, lines 60-67);

a transmitter configured to transmit the data transmission according to a flow

entry in the flow table corresponding to the masked flow key of the data transmission

(column 6, lines 10-19).

As per claim 16, Ikeda discloses the system according to claim 15, further comprising:

a plurality of mask tables, each including a plurality of bit-value masks (column 7, lines

10-22).

As per claim 17, Ikeda discloses the system according to claim 15, wherein the masking

unit is configured to determine a most granular bit-value mask by performing a longest

prefix match for the at least one field (column 7, lines 60-67).

As per claim 18, Ikeda discloses the system according to claim 15, wherein the at least

one field includes at least one selected from a group consisting of a source port, a

destination port, a source IP address, and a destination IP address (column 7, lines 42-

47).

As per claim 19, Ikeda discloses the method according to claim 15, wherein the mask

table includes at least one selected from a group consisting of an address mask table

and a port mask table (column 8, lines 22-32).

As per claim 20, Ikeda discloses the method according to claim 15, wherein the bit

value mask is configured to allow at least one bit-value mask to be entered by a service

provider (column 3, lines 25-35).

Response to Arguments

3.   Applicant's arguments filed have been fully considered but they are not

persuasive.

The Office notes the following argument(s):

(a)   Ikeda does not disclose or suggest a method for transmitting data according to a

flow table, flow key, and one or more variables, including at least the combination of

determining a most granular bit-value mask corresponding to at least one field extracted

from a header of a data transmission from a mask table having plurality of bit-value

masks, and applying the determined bit-value mask to the at least one field recited in

amended claim 1.

In response to:

(a)   Ikeda teaches masking each field in the header of a received IP packet and

creating a mask retrieval key. The flow retrieval table stores a mask retrieval key and

flow retrieval key in a correspondence relationship. The retrieval flag table can be

retrieved in accordance with the longest prefix matching or other arbitrary rule. The

packet and processing section processes the packet base on the flow action information

from the flow action table (column 7, lines 35-41, 49-59, column 8, lines 12-25, column

9, lines 9-12, 44-47, column 10, lines 15-20, 48-52, 58-63).

Indeed, Ikeda teaches the claim limitation of claim 1.

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Barbara N. Burgess whose telephone number is (571)

272-3996. The examiner can normally be reached on M-F (8:00am-4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Ettinene can be reached on (571) 272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Barbara N Burgess
Examiner
Art Unit 2157

October 27, 2007

MOUSTAFA MEKY
PRIMARY EXAMINER